

ACCELERATING NETWORK PERFORMANCE BY STRIPING  
AND PARALLELIZATION OF TCP CONNECTIONS

ABSTRACT OF THE DISCLOSURE

5           An architecture for optimizing network communications that utilizes a  
device positioned at two edges of a constrained Wide Area Network (WAN) link.  
The device intercepts outgoing network packets and reroutes them to a proxy  
application. The proxy application uses multiple, preferably persistent connections  
10 with a network accelerator device at the other end of the persistent connection. The  
proxy applications transmit the intercepted data. Packet mangling may involve  
spoofing the connection request at each end node; a proxy-to-proxy communication  
protocol specifies a way to forward an original address, port, and original transport  
protocol information end to end. The packet mangling and proxy-to-proxy  
15 communication protocol assure network layer transparency.